

OUTPUT

```
mysql> CREATE TABLE Employee(  
-> Emp_no int PRIMARY KEY,  
-> Emp_name varchar(50),  
-> Job varchar(50),  
-> Salary float,  
-> Dept_no int,  
-> Grade char(2));
```

Query OK, 0 rows affected (0.03 sec)

```
mysql> DESC employee;
```

| Field | Type | Null | Key | Default | Extra |
|----------|-------------|------|-----|---------|-------|
| Emp_no | int | NO | PRI | NULL | |
| Emp_name | varchar(50) | YES | | NULL | |
| Job | varchar(50) | YES | | NULL | |
| Salary | float | YES | | NULL | |
| Dept_no | int | YES | | NULL | |
| Grade | char(2) | YES | | NULL | |

6 rows in set (0.00 sec)

```
mysql> INSERT INTO Employee VALUES(1,"abc","Clerk",25000,10,"A");
```

Query OK, 1 row affected (0.01 sec)

```
mysql> INSERT INTO Employee VALUES(2,"bcd","Mananger",100000,30,"C");
```

Query OK, 1 row affected (0.01 sec)

```
mysql> INSERT INTO Employee VALUES(3,"cde","Professor",200000,20,"D");
```

Query OK, 1 row affected (0.01 sec)

```
mysql> INSERT INTO Employee VALUES(4,"def","Manager",150000,20,"F");
```

Query OK, 1 row affected (0.01 sec)

```
mysql> SELECT * FROM Employee;
```

| Emp_no | Emp_name | Job | Salary | Dept_no | Grade |
|--------|----------|-----------|--------|---------|-------|
| 1 | abc | Clerk | 25000 | 10 | A |
| 2 | bcd | Mananger | 100000 | 30 | C |
| 3 | cde | Professor | 200000 | 20 | D |
| 4 | def | Manager | 150000 | 20 | F |

4 rows in set (0.00 sec)

```
mysql> CREATE TABLE Department(  
-> Dept_no int PRIMARY KEY,  
-> Dept_name varchar(50),  
-> location varchar(50));
```

Query OK, 0 rows affected (0.03 sec)

```
mysql> desc Department;
```

| Field | Type | Null | Key | Default | Extra |
|-----------|-------------|------|-----|---------|-------|
| Dept_no | int | NO | PRI | NULL | |
| Dept_name | varchar(50) | YES | | NULL | |
| location | varchar(50) | YES | | NULL | |

3 rows in set (0.00 sec)

```
mysql> INSERT INTO Department VALUES(10,"Banking","Chennai");
```

Query OK, 1 row affected (0.01 sec)

```
mysql> INSERT INTO Department VALUES(20,"IT","Banglore");
```

Query OK, 1 row affected (0.00 sec)

```
mysql> INSERT INTO Department VALUES(30,"Finanace","Delhi");
Query OK, 1 row affected (0.01 sec)
```

```
mysql> INSERT INTO Department VALUES(40,"HR","Hydrabad");
Query OK, 1 row affected (0.01 sec)
```

```
mysql> SELECT * FROM Department;
```

| Dept_no | Dept_name | location |
|---------|-----------|----------|
| 10 | Banking | Chennai |
| 20 | IT | Banglore |
| 30 | Finanace | Delhi |
| 40 | HR | Hydrabad |

4 rows in set (0.00 sec)

```
mysql> CREATE TABLE Grade(
-> Grade varchar(2) PRIMARY KEY,
-> low_salary float,
-> high_salary float);
Query OK, 0 rows affected (0.02 sec)
```

```
mysql> desc Grade;
```

| Field | Type | Null | Key | Default | Extra |
|-------------|------------|------|-----|---------|-------|
| Grade | varchar(2) | NO | PRI | NULL | |
| low_salary | float | YES | | NULL | |
| high_salary | float | YES | | NULL | |

3 rows in set (0.00 sec)

```
mysql> INSERT INTO Grade VALUES("A",20000,50000);
Query OK, 1 row affected (0.00 sec)
```

```
mysql> INSERT INTO Grade VALUES("B",50001,99999);
Query OK, 1 row affected (0.01 sec)
```

```
mysql> INSERT INTO Grade VALUES("C",100000,149999);
Query OK, 1 row affected (0.01 sec)
```

```
mysql> INSERT INTO Grade VALUES("D",150000,199999);
Query OK, 1 row affected (0.01 sec)
```

```
mysql> INSERT INTO Grade VALUES("E",200000,250000);
Query OK, 1 row affected (0.00 sec)
```

```
mysql> SELECT * FROM Grade;
```

| Grade | low_salary | high_salary |
|-------|------------|-------------|
| A | 20000 | 50000 |
| B | 50001 | 99999 |
| C | 100000 | 149999 |
| D | 150000 | 199999 |
| E | 200000 | 250000 |

5 rows in set (0.00 sec)

```
mysql> ALTER TABLE Employee ADD FOREIGN KEY (Dept_no) REFERENCES
Department(Dept_no);
Query OK, 4 rows affected (0.04 sec)
Records: 4 Duplicates: 0 Warnings: 0
```

```
mysql> ALTER TABLE Employee ADD FOREIGN KEY (Grade) REFERENCES Grade(Grade);
Query OK, 4 rows affected (0.05 sec)
Records: 4 Duplicates: 0 Warnings: 0
```

```
mysql> DESC Employee;
```

| Field | Type | Null | Key | Default | Extra |
|----------|-------------|------|-----|---------|-------|
| Emp_no | int | NO | PRI | NULL | |
| Emp_name | varchar(50) | YES | | NULL | |
| Job | varchar(50) | YES | | NULL | |
| Salary | float | YES | | NULL | |
| Dept_no | int | YES | MUL | NULL | |
| Grade | varchar(2) | YES | MUL | NULL | |

```
6 rows in set (0.00 sec)
```

```
mysql> SELECT Dept_name from Department WHERE Dept_no IN (Select DISTINCT
Dept_no from Employee);
```

| Dept_name |
|-----------|
| Banking |
| IT |
| Finanace |

```
3 rows in set (0.03 sec)
```

```
mysql> SELECT Emp_name FROM Employee WHERE Salary > (SELECT Salary FROM Employee
WHERE Emp_name = "bcd");
```

| Emp_name |
|----------|
| cde |
| def |

```
2 rows in set (0.00 sec)
```

```
mysql> SELECT Emp_name FROM Employee WHERE Job = (SELECT Job FROM Employee WHERE
Emp_name = "def");
```

| Emp_name |
|----------|
| bcd |
| def |

```
2 rows in set (0.00 sec)
```

```
mysql> SELECT Emp_name, Salary FROM Employee WHERE Salary > (SELECT Salary FROM
Employee WHERE Dept_no = 30);
```

| Emp_name | Salary |
|----------|--------|
| cde | 200000 |

```
| def          | 150000 |
+-----+-----+
2 rows in set (0.00 sec)
```

```
mysql> SELECT low_salary FROM Grade WHERE Grade = (SELECT Grade FROM Employee
WHERE Emp_name = "abc");
```

```
+-----+
| low_salary |
+-----+
|      20000 |
+-----+
1 row in set (0.02 sec)
```

```
mysql> SELECT Dept_name FROM Department WHERE Dept_no = (SELECT Dept_no FROM
Employee WHERE Salary = (SELECT MAX(Salary) from Employee));
```

```
+-----+
| Dept_name |
+-----+
| IT        |
+-----+
1 row in set (0.01 sec)
```

```
mysql> Select AVG(Salary) as Average_Salary FROM Employee WHERE Dept_no =
(SELECT Dept_no FROM Department WHERE Dept_name = "IT");
```

```
+-----+
| Average_Salary |
+-----+
|      175000    |
+-----+
1 row in set (0.00 sec)
```

```
mysql> SELECT Emp_name,Job FROM Employee WHERE Dept_no = (SELECT Dept_no FROM
Department WHERE Dept_name = "IT") ORDER BY Emp_name;
```

```
+-----+-----+
| Emp_name | Job   |
+-----+-----+
| cde      | Professor |
| def      | Manager  |
+-----+-----+
2 rows in set (0.00 sec)
```

```
mysql> SELECT Emp_name FROM Employee WHERE Salary > (SELECT AVG(low_salary) FROM
Grade) and Salary > (SELECT AVG(high_salary) FROM Grade);
```

```
+-----+
| Emp_name |
+-----+
| cde      |
| def      |
+-----+
2 rows in set (0.00 sec)
```

```
mysql> SELECT Dept_name FROM Department WHERE Dept_no = (SELECT Dept_no FROM
Employee GROUP BY Dept_no HAVING COUNT(*) > (SELECT COUNT(*) FROM Department
WHERE Dept_name = 'Banking'));
```

```
+-----+
| Dept_name |
+-----+
| IT        |
+-----+
1 row in set (0.00 sec)
```